

15mW 945nm VCSEL Array on Surface Mount Carrier

PCW-SMV-015-W0945

- Vertical-Cavity Surface-Emitting Laser technology
- Very high reliability
- Wavelength stabilized & narrow spectral width (< 1 nm typ.)
- Easily soldered to carrier / heat exchanger

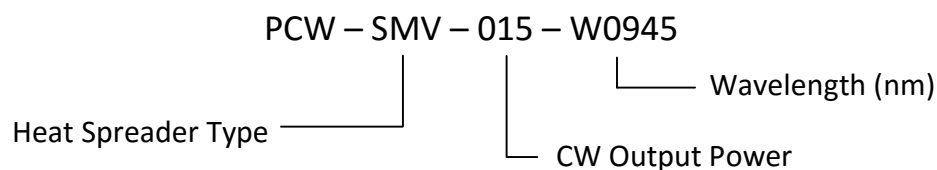
Optical & Electrical Characteristics

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
CW Output power	20 mA, 20°C Heat-sink	12	15	18	mW
Threshold current	20°C Heat-sink	0.8	0.85	0.95	mA
Operating current	P _{OUT} , 20°C Heat-sink	16	18	20	mA
Operating voltage	P _{OUT} , 20°C Heat-sink	1.8	2.0	2.4	V
Differential resistance	20°C Heat-sink	90	100	110	Ω
Slope efficiency	20°C Heat-sink	0.8	0.9	1	W/A
Conversion efficiency	P _{OUT} , 20°C Heat-sink	30	40	--	%
Center wavelength	P _{OUT} , 20°C Heat-sink	935	945	955	nm
Spectral width (FWHM)	P _{OUT} , 20°C Heat-sink	--	0.8	2	nm
Wavelength shift	20°C Heat-sink	--	--	0.07	nm/°C
N.A. (4-sigma)	P _{OUT} , 20°C Heat-sink	--	0.17	--	--
Emission diameter	--	--	0.02	--	mm

Maximum Absolute Ratings

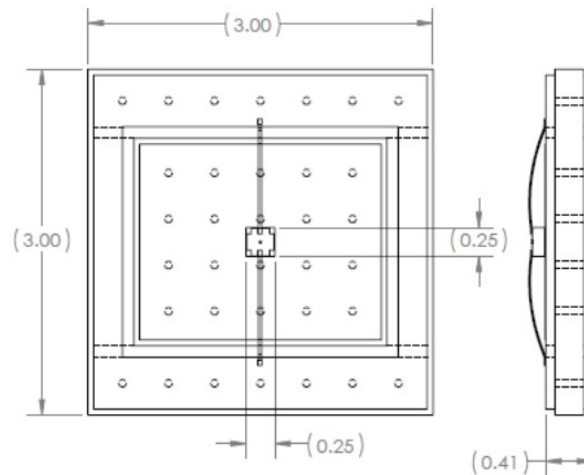
PARAMETER	CONDITIONS
Forward current	40 mA Continuous
Reverse current	25 μA
Operating temperature	0 to 80 °C
Storage temperature	-40 to +80 °C

Ordering information

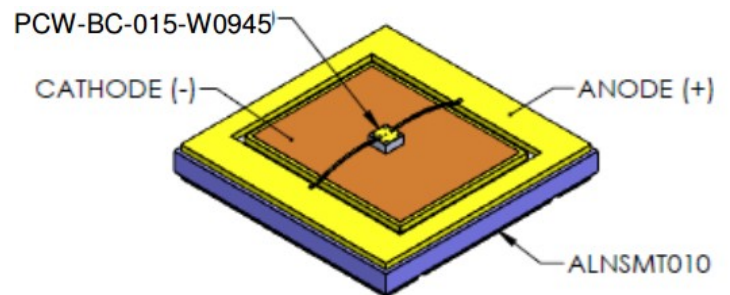
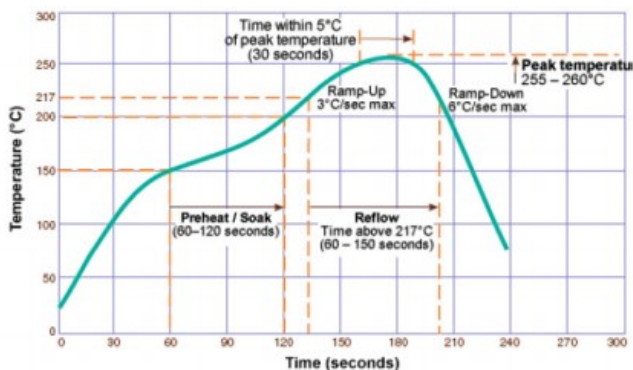


Mechanical Characteristics

PARAMETER	CONDITIONS
Package width	3.0 ± 0.1 mm
Package length	3.0 ± 0.1 mm
Package height	0.51 ± 0.7 mm
Die Size	0.25 x 0.25 mm ²
Max solder temperature	260 °C



Reflow Parameters



- NOTES:
1. TOPSIDE AND BACKSIDE METALLIZATION: Cu/Ni/Au. METALLIZATION PULLBACK: 0.05 mm.
 2. COPPER FILLED VIAS.
 3. WIREBOND SHOWN FOR INFORMATION ONLY. ACTUAL WIREBOND SIZE, NUMBER AND CONFIGURATIONS MAY VARY.
 4. 2D BARCODE.

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Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting Class IV radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate safety precautions should operate a laser product. Directly viewing the laser beam or exposure to specular reflections must be avoided. Serious injury may result if any part of the body is exposed to the beam. The eye is extremely sensitive to the infrared radiation and therefore, proper eye-wear must be worn at all times. Use of optical instruments with these products may increase eye hazard. Always wear eye protection when operating.



REV.B – 8/16